

We Claim

1. An apparatus for reducing the aerodynamic drag of a wheeled vehicle in a flowstream, said vehicle having a vehicle body and a wheel assembly supporting the vehicle body from thereunder, comprising:

a baffle assembly having means for mounting to the wheeled vehicle upstream of the wheel assembly so as to deflect airflow away from the wheel assembly and reduce the incident pressure thereon.

2. The apparatus of claim 1,

wherein the baffle assembly is adapted to be mounted underneath the vehicle body in front of the wheel assembly.

3. The apparatus of claim 2,

wherein the baffle assembly is adapted to be mounted to an underside of the vehicle body.

4. The apparatus of claim 3,

wherein the baffle assembly includes a wedge-shaped skirt comprising two panels adapted to extend down from the underside of the vehicle body when mounted thereto, the two panels connected at a

leading end of each panel and diverging towards the wheel assembly at a trailing end of each panel.

5. The apparatus of claim 4,

wherein the baffle assembly further includes a third panel having leading and trailing ends, with the trailing end of the third panel connected to the leading end of the wedge-shaped skirt.

6. The apparatus of claim 1,

wherein the baffle assembly includes a pair of side skirts adapted to extend down to a level below the vehicle body adjacent opposing lower side edges thereof.

7. The apparatus of claim 6,

wherein the pair of side skirts are parallel to each other in a direction of the flowstream.

8. An apparatus for reducing the aerodynamic drag of a bluff body in a flowstream in ground effect, the bluff body having a body portion and a wheel assembly supporting the body portion, comprising:

means securable to the bluff body upstream of the wheel-axle assembly for deflecting airflow away from the wheel assembly to reduce the incident pressure thereon.

9. The apparatus of claim 8,

wherein the means for deflecting airflow includes means for impeding cross-flow of the flowstream across an underside of the body portion of the bluff body.

10. An aerodynamic bluff-bodied vehicle comprising:

a vehicle body;

a wheel assembly supporting the vehicle body from thereunder;

and

a baffle assembly located upstream of the wheel assembly for deflecting airflow away from the wheel assembly to reduce the incident pressure thereon.

11. The aerodynamic bluff-bodied vehicle of claim 10,

wherein the wheel assembly is a rear wheel assembly near a tail end of the vehicle body.

12. The aerodynamic bluff-bodied vehicle of claim 11,
wherein the baffle assembly is positioned underneath the vehicle
body in front of the rear wheel assembly.
13. The aerodynamic bluff-bodied vehicle of claim 12,
wherein the baffle assembly is connected to an underside of the
vehicle body.
14. The aerodynamic bluff-bodied vehicle of claim 13,
wherein the baffle assembly includes a wedge-shaped skirt
comprising two panels extending down from the underside of the vehicle
body, the two panels connected at a leading end thereof and diverging
towards the rear wheel assembly at a trailing end thereof.
15. The aerodynamic bluff-bodied vehicle of claim 14,
wherein the baffle assembly further includes a third panel having
leading and trailing ends, with the trailing end of the third panel
connected to the leading end of the wedge-shaped skirt.

16. The aerodynamic bluff-bodied vehicle of claim 11,

wherein the baffle assembly includes a pair of side skirts extending down to a level below the vehicle body adjacent opposing lower side edges thereof.

17. The aerodynamic bluff-bodied vehicle of claim 16,

wherein the pair of side skirts are parallel to each other in a direction of the flow stream.

18. The aerodynamic bluff-bodied vehicle of claim 11,

wherein the aerodynamic bluff bodied vehicle is a trailer of a tractor-trailer arrangement, with the vehicle body of the trailer having a leading end supportable by a tractor, and a trailing end supported by the rear wheel assembly.